

# Toluene

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This document provides a brief description of Toluene, its uses, and the potential hazards associated with short-term and long-term exposure. Environmental impact information for accidental releases is included. This information is general in nature and is not intended as a replacement for the material safety data sheet (SDS), product label and other safe handling literature. For additional information consult the LANXESS Corporation safety data sheet.

## Identification

|                       |                                |
|-----------------------|--------------------------------|
| <b>Chemical Name:</b> | Toluene                        |
| <b>Synonym(s):</b>    | Methylbenzene<br>Phenylmethane |
| <b>CAS Number:</b>    | 108-88-3                       |

## Description

**Overview:** Toluene is a clear, colorless liquid with a sweet, pungent, benzene-like odor.

**Uses:** Toluene is mainly used as an additive to gasoline to improve octane ratings. It is also used to produce benzene as well as paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber.

### Properties:

|                             |                              |
|-----------------------------|------------------------------|
| <b>Solubility in Water:</b> | Soluble 573 - 587 mg/L, 25°C |
| <b>Melting Point:</b>       | -95°C (-139°F)               |
| <b>Boiling Point:</b>       | 110.6°C (231.08°F)           |
| <b>Flash Point</b>          | 4.4°C (39.92°F)              |
| <b>Auto-Ignition:</b>       | 480°C (896°F)                |

### Potential Human Health Effects

#### Occupational Exposure

Potential for occupational exposure exists during manufacture, at storage and staging areas and within operations where Toluene is used as an additive or processing aid in the manufacture of other products. A much lower potential for exposure exists in facilities using the chemical in closed manufacturing processes by trained personnel.

#### Employee Training

Workers should be trained to implement proper handling procedures and to understand the potential health and physical hazards of Toluene. Local and general exhaust ventilation should be used to keep worker exposure to airborne contaminants below any recommended or statutory limits. In cases where airborne concentrations are unknown, a NIOSH approved air-purifying respirator with organic vapor cartridges and particulate prefilter should be used to minimize exposure. In addition, LANXESS recommends safety glasses with side shields, impervious gloves and suitable protective clothing be worn when handling Toluene.

#### Consumer Exposure

LANXESS Corporation does not sell Toluene to the general public. Consumers may be exposed to trace amounts of the chemical compound via inhalation of ambient air, ingestion of food and drinking water, dermal contact with consumer products containing Toluene and/or exposure to certain wood and cooking smokes.

#### Short-Term Health Effects

Toluene may be fatal if the substance enters the airways by ingestion. Skin contact may be irritating exhibiting symptoms of itching and redness. Inhalation may cause drowsiness or dizziness. Skin contact may be irritating.

#### Long-Term Health Effects

Prolonged or repeated exposure to toluene may cause neurological damage such as neuropsychological effects, damage to fertility or unborn child, auditory dysfunction, and effects on color vision.

### Physical Hazards

Toluene can be ignited under almost all ambient temperature conditions and produces hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, is readily ignited under almost all conditions. Avoid heat, open flames and other potential sources of ignition.

### Potential Environmental Impact

Toluene is readily biodegradable and is not expected to bioaccumulate. Algae are significantly less sensitive to toluene than either invertebrates or fish. An uncontrolled release to environmental water sources may pose chronic effects to aquatic life. **Conclusion**

## Toluene

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Under normal conditions of anticipated use as described in this Product Safety Assessment, and if the recommended safe use and handling procedures are followed, Toluene is not expected to pose a significant risk to human health or the environment.

## References

*ECHA InfoCard, Toluene*, European Chemicals Agency

*PubChem*, National Library of Medicine, National Center for Biotechnology Information

## Contact Information

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## Notices

### Use and Application Information

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.